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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/811,605	03/20/2001	Shunji Baba	1614.1142	9323

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WASHINGTON, DC 20001

EXAMINER

TALBOT, BRIAN K

ART UNIT	PAPER NUMBER
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1762

*8*

DATE MAILED: 01/09/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/811,605

Applicant(s)

BABA ET AL.

Examiner

Brian K Talbot

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 05 November 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,3,6,7 and 13-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,3,6,7 and 13-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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1. The amendment filed 11/5/02 has been considered and entered. Claim 2 has been canceled. Claims 13-24 have been added. Claims 1,3,6,7 and 13-24 remain in the application.
2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
3. In light of the amendment filed 11/5/02, the objection to the specification concerning the Title and the 35 USC 112 first paragraph rejection have been withdrawn. However, the following rejection has been necessitated by the amendment:

***Claim Rejections - 35 USC § 112***

4. Claims 1,3 and 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The claims recite an “imaging” step, however, it is unclear as to when this “imaging” step is performed. Before the resin is applied to the wiring board or after the spreading of the resin. Clarification is requested.

***Claim Rejections - 35 USC § 102***

5. Claim 1 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP 6-120,276.

JP 6-120,276 teaches applying a resin from a syringe to a circuit board whereby the coating applied is “imaged” after application to the circuit board but prior to drying. The “imaging” step then controls the dispenser based on the results of the measurement.

***Claim Rejections - 35 USC § 103***

6. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-120,276.

JP 6-120,276 fails to teach the “measuring” device being of a fluorescent type.

It is the Examiner’s position that the use of fluorescence is commonplace in the art of “measuring/monitoring” a coating and hence, it would have been within the skill of one practicing in the art to have utilized any well know measuring/monitoring technique such as fluorescence to obtain the desired results.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-120,276 in combination with Nakasu et al. (6,213,356 B1).

JP 6-120,276 fails to teaching measuring/monitoring the drop prior to contact with the substrate.

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Nakasu et al. (6,213,356 B1) depicts monitoring a dispensed droplet of coating material by a sensor (25) prior to contacting the substrate or monitoring the residual material on the nozzle.

Therefore, it would have been obvious for one skilled in the art at the time the invention was made to have modified JP 6-120,276 process by incorporating a measuring/monitoring device to measure the droplet prior to contact with the substrate as evidenced by Nakasu et al. (6,213,356 B1) with the expectation of achieving similar results, i.e. a more controlled deposition of the coating material.

With respect to changing the distance of the nozzle from the substrate or to monitoring the nozzle's tip, it is the Examiner's position that these differences are conventional in the art as well as being commonplace. The distance from the substrate is arbitrary and effects the spread of coating material. The art teaches monitoring both the droplet and the coating material dispensed and it is the Examiner's position that one skilled in the art would have been suggested that monitoring the nozzle tip could be done to avoid clogging or unnecessary deposition.

Claims 13-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 6-120,276 in combination with Nakasu et al. (6,213,356 B1) further in combination with either Smith et al. (5,377,961) or Yost et al. (5,855,323).

JP 6-120,276 in combination with Nakasu et al. (6,213,356 B1) fails to teach forming a solder ball at the tip of a nozzle prior to being detached to a substrate.

Smith et al. (5,377,961) or Yost et al. (5,855,323) both teach solder ball formation prior to application to a substrate.

Therefore, it would have been obvious at the time the invention was made to have modified JP 6-120,276 in combination with Nakasu et al. (6,213,356 B1) process be forming a solder ball at the nozzle tip prior to deposition as evidenced by Smith et al. (5,377,961) or Yost et al. (5,855,323) with the expectation of achieving similar results.

***Response to Amendment***

7. Applicant's arguments filed 11/5/02 have been fully considered but they are moot in view of the rejection above.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

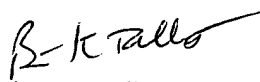
A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

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9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian K Talbot whose telephone number is (703) 305-3775. The examiner can normally be reached on Tuesday-Friday 6AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive P Beck can be reached on (703) 308-2333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-6078 for regular communications and (703) 872-9765 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3775.

  
Brian K Talbot  
Primary Examiner  
Art Unit 1762

BKT  
January 3, 2003